

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of

Directsat Corporation

Application for Modification of Construction Permit
for a Direct Broadcast Satellite System

File No. 53-SAT-ML-95

ORDER

Adopted: September 9, 1996

Released: September 9, 1996

By the Chief, Office of Engineering and Technology, and Acting Chief, International Bureau:

I. INTRODUCTION

1. By this Order, we grant a request by Directsat Corporation ("Directsat"), a permittee in the Direct Broadcast Satellite ("DBS") service, to modify its DBS authorization to use fixed-satellite service ("FSS") frequencies, on a non-conforming basis, in the 3698.3-3699.7 MHz, 5923.0-5924.0 MHz, and 6426.0-6427.0 MHz bands for all on-orbit telemetry, tracking and control ("TT&C") functions on its DBS space station, USABSS-4.¹

II. BACKGROUND

2. In November 1993, the Commission awarded orbital/channel assignments to Directsat at the 118.8° W.L. orbital location for its eastern DBS satellite, USABSS-4. At that time, Directsat planned to use C-band frequencies for launch and ascent operations and Ku-band frequencies for on-orbit TT&C functions. TT&C functions are required by all spacecraft for orbital maneuvers and spacecraft control operations.

3. Directsat seeks to modify its construction permit to include TT&C operations in

¹ Public Notice, Report No. 72570, Report No. SPB-6 (March 6, 1995).

the above-referenced frequencies because, it maintains, consolidated transfer orbit and on-orbit TT&C will permit longer satellite life and significant satellite construction cost savings that can be passed on to consumers. Directsat states that the use of Ku-band for TT&C operations would significantly increase the costs of construction and operation of its space station. Directsat recognizes its obligation to coordinate its operations with those of existing and planned adjacent satellites, and states that it will take all reasonable steps necessary to avoid interference. According to Directsat, its TT&C operations in the proposed bands will not interfere with the operations of any other authorized service providers.

4. Advanced Communications Corporation ("ACC") opposes Directsat's application.² ACC argues that Directsat offers no compelling justification or relevant precedent for the requested waiver, and that its request does not meet the requirements for waiver of the Table of Allocations as set forth in Section 2.102 of the Commission's rules, 47 C.F.R. § 2.102.

5. Directsat maintains that its proposed use is consistent with the primary allocation of the requested frequency bands, but requests a waiver of the U.S. Table of Allocations to the extent that its proposed modification does not conform to footnote US245 of the Table.³ Directsat also contends that Advanced lacks standing in this proceeding. Because we address issues raised by ACC in our examination of Directsat's proposed modification, we do not reach the question of ACC's standing to oppose this application.

III. DISCUSSION

6. Pursuant to its modification application, Directsat requests a waiver of Section 2.102 of our rules to the extent that its proposed modification does not conform to footnote US245 of the U.S. Table of Frequency Allocations.⁴ Directsat asserts that due to the superior propagation characteristics and lack of susceptibility to rain attenuation in the requested C-band frequencies, its proposed modification will result in more reliable TT&C operations. However, two of the bands selected by Directsat for TT&C operations, 3698.3-3699.7 MHz and 5923.0-5924.0 MHz, are allocated on a primary basis to the radiolocation

² Dominion Video Satellite's ("DVS") April 18, 1996 opposition to Directsat's request was untimely filed, and is dismissed. In any event, the concerns raised in DVS' pleading are not relevant to this proceeding. They relate to and are addressed in separate proceedings involving DVS and Directsat. See *Dominion Video Satellite*, 10 F.C.C. Rcd 12743 (1995); *Directsat Corporation*, DA 96-6 (released January 11, 1996).

³ Directsat Application at 2; Directsat Response at 2.

⁴ The U.S. Table of Frequency Allocations is set forth at 47 C.F.R. § 2.106. Section 2.102 of the rules requires that the authorization of the use of frequencies shall generally be in accordance with the Table. 47 C.F.R. § 2.102.

service.⁵ The 5923.0-5924 MHz band is also allocated to amateur operations on a secondary basis. Radiolocation and amateur operations may cause interference to, and thereby affect the reliability of, Directsat's TT&C operations. Similarly, frequencies in the 6426.0-6427.0 MHz band are allocated on a primary basis to mobile services; Directsat's proposed TT&C operations could therefore cause or receive harmful interference to or from terrestrial mobile users. Moreover, the proposed modifications do not conform to the U.S. Table of Frequency Allocations because TT&C operations would not be conducted in a band allocated to space operations or in the broadcasting satellite service ("BSS") and FSS bands in which Directsat's satellite will normally operate.

7. Because two of the requested bands have primary Government allocations, a consultation was required with the National Telecommunication and Information Administration ("NTIA"). NTIA did not object to Directsat's use of the requested frequencies with the understanding that such use will be on a non-interference basis. In other words, Directsat's operations must not cause harmful interference to other authorized users of these frequency bands; if such interference occurs Directsat will be solely responsible for alleviating it; and Directsat's TT&C operations in these bands will not be protected from harmful interference to its operations from other authorized Government users. Thus, consistent with the interagency coordination, we will impose conditions on Directsat's use of the requested frequencies as discussed below. Furthermore, the same conditions will be applied with respect to non-Government operations.

8. We reject ACC's request that we deny Directsat's application.⁶ We have permitted non-conforming uses when there is little potential for interference into any service authorized under the Table of Frequency Allocations and when the non-conforming use is conditioned to operate on a non-interference, non-protected basis.⁷ Grant of the application will permit Directsat to operate its satellite at lower cost, and will not adversely impact other authorized users in the requested frequency bands. Further, we do not believe other users of

⁵ Frequencies in the 3698.8-3699.7 MHz band are allocated on a primary basis to aeronautical radionavigation and radiolocation services for Government use and to the fixed-satellite service in accordance with footnote US245 for non-Government use. Frequencies in the 5923.0-5924.0 MHz band are allocated on a primary basis to radiolocation service for Government use and to the fixed-satellite service in accordance with footnote US245 for non-Government use, as well as to the amateur radio service on a secondary basis. Frequencies in the 6426-6427 MHz band are allocated for non-Government use on a primary basis to mobile services and fixed-satellite services. 47 C.F.R. § 2.106.

We note that the band 3650 - 3700 MHz has been identified by NTIA as a portion of the spectrum to be reallocated for mixed use in January 1999. See *Spectrum Reallocation Final Report*, February 1995 - NTIA Special Report 95-32.

⁶ We note that, in any event, ACC is no longer a DBS permittee and will not be affected in any way by the outcome of this proceeding.

⁷ See, e.g., *Fugro-Chance, Inc.*, 10 F.C.C. Rcd. 2860 (1995); *Qualcomm, Inc.*, 4 F.C.C. Rcd. 1543 (1989); *Geostar Positioning Corp.*, 4 F.C.C. Rcd. 4538 (1989).

the C-band frequencies will be affected.⁸ We therefore find that grant of the application will serve the public interest, convenience, and necessity. Nevertheless, Directsat is required to complete any additional coordination necessary before commencing operations in this band, including operations during transfer orbit.

9. In granting this modification, we do not authorize nonconforming use of the above-referenced frequency bands on a permanent basis. The Commission may in the future determine that the nonconforming use permitted in this authorization is not an appropriate use of these frequency bands, or that additional licensing conditions may be necessary. The term of this authorization will thus be limited to a term concluding on January 1, 1999, in order to permit review of the suitability of the requested frequency bands for TT&C operations, or of the need for any operational or geographic limitations on or modifications of TT&C operations. Directsat is also hereby placed on notice that any replacement satellites should not be designed in reliance on the availability of the above-referenced frequency bands for TT&C operations.

10. Directsat, in accepting the terms of this modification grant, will operate at its own risk: it must accept any interference and cannot claim protection from authorized users of the requested 3698.3-3699.7 MHz, 5923.0-5924.0 MHz, and 6426.0-6427.0 MHz frequency bands. We will authorize its operations on that basis only; that is, we will condition this authorization on Directsat's immediate cessation of operations upon interference to authorized users of the requested frequency bands.

11. Accordingly, IT IS ORDERED, pursuant to §§ 0.241 and 0.261 of the Commission's rules, 47 C.F.R. §§ 0.241 and 0.261, that File No. 53-SAT-ML-95 IS GRANTED, and Directsat Corporation IS AUTHORIZED to use the 3698.3-3699.7 MHz, 5923.0-5924.0 MHz, and 6426.0-6427.0 MHz band fixed-satellite service frequencies for all on-orbit telemetry, tracking and control functions on USABSS-4, subject to the following conditions:

- a) No harmful interference shall be caused to any existing or future authorized service, either domestically or internationally, in the 3698.3-3699.7 MHz, 5923.0-5924.0 MHz and 6426.0-6427.0 MHz frequency bands, and Directsat shall immediately cease offending operations upon notification of interference to any of these services;
- b) Directsat, as a non-conforming user, will operate at its own risk and must accept any interference from any service authorized to use the 3698.3-3699.7 MHz, 5923.0-5924.0 MHz and 6426.0-6427.0 MHz frequency bands;
- c) Directsat shall maintain a point of contact who can arrange to remedy any

⁸ However, we note that Directsat's TT&C functions in the 3698.3-3699.7 MHz band may receive interference from the Radiolocation Services operating in that band. See *Analysis of Electromagnetic Compatibility between Radar Station and 4 GHz Fixed-Satellite Stations*, NTIA Report 94-313.

interference problems immediately or to terminate operations if necessary. Directsat shall submit the name and telephone number of the contact to the International Bureau within 30 days of the release of this order;

d) Directsat shall coordinate the operations of USABSS-4, including operations during transfer orbit, with the operation of in-orbit satellites of U.S. and other affected Administrations; and

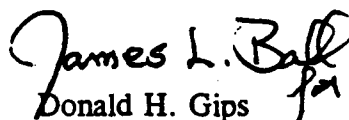
e) Directsat shall be authorized to use the 3698.3-3699.7 MHz, 5923.0-5924.0 MHz and 6426.0-6427.0 MHz frequency bands for a period terminating January 1, 1999; and

12. IT IS FURTHER ORDERED that this Order is effective upon release.

FEDERAL COMMUNICATIONS COMMISSION



Richard M. Smith
Chief, Office of Engineering and Technology



Donald H. Gips
Chief, International Bureau